

## ABSTRACT OF THE DISCLOSURE

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A manipulator for accurately positioning a test head in automatic test systems supports the test head internally and reduces the overall size of the manipulator. The manipulator includes an elongated blade that extends into a central region of the test head. A spherical bearing is disposed within an opening of the elongated blade, and has an outer race attached to the elongated blade. A shaft passes through the inner race of the spherical bearing and attaches to the body of the test head via a transition insert. The test head can thus be supported internally and made to rotate in compliance on the spherical bearing, about all axes of rotation.